

Docket No. AUS920030325US1

**CLAIMS:**

What is claimed is:

1. A method of initializing an electronic device, comprising the steps of:  
beginning execution of initialization code in a first memory to copy a first portion of the initialization code from the first memory into a second memory;  
continuing execution of the initialization code in the first memory to software-enable instruction caching; and  
executing at least some of the first portion of initialization code copied into the second memory.
2. The method of Claim 1, wherein the step of executing at least some of the first portion of initialization code comprises copying a second portion of the initialization code from the first memory into a third memory.
3. The method of Claim 2, further comprising the step of executing the second portion of initialization code copied into the second memory.
4. The method of Claim 1 wherein instruction caching is disabled during the step of beginning execution of initialization code.

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5. The method of Claim 1 wherein instruction caching is enabled during the step of executing at least some of the first portion of initialization code.

6. The method of Claim 3 wherein instruction caching is enabled during the step of executing the second portion of initialization code.

7. The method of Claim 1, wherein the first memory is at least one non-volatile storage device.

8. The method of Claim 2, wherein the second memory is cache memory and the third memory is system memory.

9. The method of Claim 1 wherein code to software-enable instruction caching is located at an end of a page of the first memory.

10. The method of Claim 9, wherein a next page immediately following the page is un-initialized.

11. An apparatus, comprising:

a first memory organized as a plurality of memory pages, wherein the first memory has initialization code stored therein, the initialization code having an instruction cache enabling routine located at an end of one of the memory pages.

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12. The apparatus of Claim 11, wherein a memory page immediately following the instruction cache enabling routine is un-initialized.

13. An apparatus comprising a processor, a first memory and a second memory, wherein the first memory comprises initialization code including a first portion and a second portion, the first portion having instructions for copying the first portion into the second memory, instructions for enabling instruction caching for the processor, and instructions for copying the second portion into a third memory.

14. The apparatus of Claim 13, wherein the first memory is organized as a plurality of memory pages, and wherein the instructions for enabling instruction caching for the processor are located at a memory page boundary within the first memory.

15. The apparatus of Claim 14, wherein a memory page immediately following the memory page boundary is un-initialized

16. The apparatus of Claim 13, wherein the first memory is at least one non-volatile storage device.

17. The apparatus of Claim 16, wherein the second memory is cache memory and the third memory is system memory.

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18. A method for using the apparatus of Claim 13, comprising the steps of:

- executing at least some of the initialization code in the first memory to copy the first portion of the initialization code from the first memory to the second memory;

- executing the instructions in the first memory for enabling instruction caching; and

- executing at least some of the first portion of the initialization code in the second memory to copy the second portion of initialization code from the first memory to the third memory.

19. A method for initializing an apparatus comprising a first memory and second memory, the first memory having apparatus initialization code stored therein, comprising the steps of:

- executing at least some of the initialization code in the first memory to copy a first portion of the initialization code from the first memory to the second memory;

- executing at least some of the initialization code in the first memory to software enable instruction caching; and

- executing at least some of the first portion of the initialization code in the second memory to copy a second portion of initialization code from the first memory to a third memory.

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20. The method of Claim 19, further comprising the step of executing the second portion of the initialization code from the third memory to further initialize the apparatus.

21. The method of Claim 19, wherein instruction caching is disabled during the step of executing at least some of the initialization code in the first memory to copy a first portion of the initialization code from the first memory to the second memory.

22. The method of Claim 19, wherein instruction caching is enabled during the step of executing at least some of the first portion of the initialization code in the second memory.

23. The method of Claim 20, wherein instruction caching is enabled during the step of executing the second portion of the initialization code.

24. A computer program product on a computer readable medium, the computer program product having initialization code for initializing an apparatus, the initialization code comprising:

first code for copying a first portion of the initialization code from a first memory to a second memory;

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second code for software enabling instruction caching in the apparatus; and

third code for transferring execution control to continue execution of the first portion copied in the second memory with instruction caching enabled.